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### REMARKS

The claims have been amended without adding new matter in order to correct minor informalities and to address other issues raised by the Examiner. Claims 1 and 11-14 have been amended without adding new matter. Claims 15-44 were previously canceled without prejudice. Fourteen claims remain pending in the application: Claims 1-14. Reconsideration of claims 1-14 in view of the amendments above and remarks below is respectfully requested.

By way of this amendment, Applicants have made a diligent effort to place the claims in condition for allowance. However, should there remain any outstanding issues that require adverse action, it is respectfully requested that the Examiner telephone the undersigned at (858) 552-1311 so that such issues may be resolved as expeditiously as possible.

### Claims Conflicting with Other Pending Applications

1. Claims 1-9 and 13 of this application conflict with claims 1, 3, 6, 7 and 15 of Application No. 09/877,371 and claims 1-6, 17, 22(?) and 26 of Application No. 09/877,509 under 37 C.F.R. 1.78(b).

As amended herein, claims 1-9 and 13 of this application do not conflict with currently pending claims 1, 3, 6, 7 and 15 of Application No. 09/877,371 (the '371 application) and also do not conflict with currently pending claims 1-6, 17, 22(?) and 26 of Application No. 09/877,509 (the '509 application). Claims 1-9 and 13 do not conflict at least because they recite limitations not present in claims 1, 3, 6, 7 and 15 of the '371 application and not present in claims 1-6, 17, 22(?) and 26 of the '509 application. For example, claims 1-9 and 13 require "each emitter line having electron emitting material continuously extending across multiple, separately addressable regions of the cathode substrate, each region adapted to emit electrons therefrom" and that "there is no separating structure positioned in between portions of the electron emitting material

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forming an emitter line on the surface of the cathode substrate", which is not required by the claims of the '371 application and the '509 application.

Therefore, since the present claims include limitations not required by the co-pending claims, this represents a clear line of demarcation, and thus, it is respectfully submitted that there is no conflict and that the rejection is overcome and should be withdrawn.

#### Double Patenting

2. Claims 1-3, 6-9, and 13 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3, 6 and 15 of copending application no. 09/877,371.

Applicants submit that both the present application and the co-pending application are commonly owned by Sony Corporation and Sony Electronics Inc. For example, the present application has been assigned to Sony Corporation and Sony Electronics Inc. and recorded at reel and frame 011896/0953 while application number 09/877,371 has been assigned to Sony Corporation and Sony Electronics Inc. and recorded at reel and frame number 011900/0478. Applicants submit herewith a terminal disclaimer in compliance with 37 C.F.R. 1.321(c). Therefore, it is respectfully submitted that the provisional rejection should be withdrawn.

3. Claims 1-8 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6, 17, 22 and 26 of copending application no. 09/877,509.

Applicants submit that both the present application and the co-pending application are commonly owned by Sony Corporation and Sony Electronics Inc. For example, the present application has been assigned to Sony Corporation and Sony Electronics Inc. and recorded at reel and frame 011896/0953 while application number

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09/877,509 has been assigned to Sony Corporation and Sony Electronics Inc. and recorded at reel and frame number 011893/0412. Applicants submit herewith a terminal disclaimer in compliance with 37 C.F.R. 1.321(c). Therefore, it is respectfully submitted that the provisional rejection should be withdrawn.

**Claim Rejections - 35 U.S.C. §102**

4. Claims 1-5, 10, 12 and 14 stand rejected under 35 U.S.C. § 102(b), as being anticipated by U.S. Patent No. 6,094,001 (Xie).

As amended herein and similar to claim 13, which was not rejected in view of Xie, claim 1 now requires that "there is no separating structure positioned in between portions of the electron emitting material forming an emitter line on the surface of the cathode substrate". As clearly described in Xie, emitters 420 are located in emitter wells 421 formed in a dielectric layer 418. There is no description or suggestion that such emitters 420 be located adjacent to one another without being separated on the surface of the substrate by the dielectric material layer 418 or other structure. Since Xie does not disclose all limitations recited in claims 1-5, 10, 12 and 14, it is respectfully submitted that Xie does not anticipate these claims; thus, the rejection is overcome and should be withdrawn.

Furthermore, Xie would not render that recited in these claims obvious since there is no teaching or suggestion that the emitters 420 be located adjacent to one another without being separated on the surface of the substrate by the dielectric material layer 418.

5. Claims 1-9 and 12-14 stand rejected under 35 U.S.C. § 102(b), as being anticipated by U.S. Patent No. 5,977,703 (Ju et al.).

As amended herein, claim 1 now recites "each emitter line having electron emitting material continuously extending across multiple, separately addressable

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regions of the cathode substrate, each region adapted to emit electrons therefrom". For example, according to one embodiment of the invention described in the specification of the present application, emitter lines continuously extend across the substrate and span across multiple sub-pixel regions 1106 of the emitter line that are separately addressable.

Ju describes field emission displays having simple vacuum sealing and in which electric and optical characteristics between pixels are improved. For example, Ju describes a display having tip emitters 130 formed in an n-well 140 within a groove 120 that corresponds to a pixel (see FIGS. 2A and 3A). Ju also describes an emitter film 132 with tip emitters 130 formed thereon within an n-well 140 within a groove 122 that corresponds to a pixel (see FIGS. 2B and 4A). The grooves may be stripe-shaped grooves 120 or cavity-shaped grooves 122. According to Ju, one groove corresponds to one pixel (see col. 3, line 33). The emitters 130, 132 emit electrons toward an anode including a glass plate 150 having a transparent electrode 160 and a light emitting layer 170 formed on the electrode 160. Each section of the light emitting layer 170 corresponds to a particular emitter section within a groove located directly below. In operation, each section of emitters can be addressed to cause electron emission therefrom toward the corresponding section of the light emitting layer.

Regarding the striped-shaped grooves 120 of FIGS. 2A and 3A, an "emitter line" of emitter material could reasonably be interpreted to be several discrete and separate emitter 130 sections (formed of either tips 130 alone or tips 130 on film 132) in a line within a given groove (see FIG. 3A, four sections of emitters 130 are in a line within a groove 120). However, in this case, such "emitter lines" do not have "electron emitting material continuously extending across multiple, separately addressable regions of the cathode substrate", as required by claim 1. That is, the separately addressable sections of emitters 130 (in this case, interpreted as separately addressable regions) in a given groove do not continuously extend between each other. In other

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words, there is no emitter material extending continuously across these sections of emitters. As clearly seen in FIG. 3A, there is a break in between sections of the emitters 130 along a line of emitter sections formed within a given groove 120. Accordingly, given this interpretation, Ju does not disclose or suggest all limitations of claim 1, thus, Ju does not anticipate claim 1.

Regarding the cavity-shaped grooves 122 of FIGS. 2B and 4A, if the recited "emitter line" of emitter material is interpreted as a series of separate and discrete emitter 130 sections (formed of either tips 130 alone or tips 130 on film 132) in separate cavity-shaped grooves 122 in a line (see FIG. 4A), then in such arrangement, there is a separating structure (e.g., the substrate) positioned in between emitter sections of adjacent grooves 122. In contrast, claim 1 specifically recites that there is no separating structure positioned in between portions of the electron emitting material forming an emitter line on the surface of the cathode substrate. On the other hand, if the recited "emitter line" is interpreted as a line of emitter material within a single cavity-shaped groove 122 (since the cavity-shaped groove is slightly elongated in shape), then in such arrangement, all emitting materials within a single groove 122 emit electrons at once when addressed. That is, different portions or "regions" of the emitter section within a single cavity-shaped groove 122 are not separately addressable to emit electrons. In contrast, claim 1 requires that different regions of an emitter line are separately addressable. Specifically, claim 1 recites "each emitter line having electron emitting material continuously extending across multiple, separately addressable regions of the cathode substrate, each region adapted to emit electrons therefrom". Accordingly, given either of these interpretations, Ju does not disclose or suggest all limitations of claim 1, thus, Ju does not anticipate claim 1.

Therefore, since that described by Ju does not meet each and every limitation of claim 1, Ju does not anticipate claims 1-9 and 12-14. Therefore, it is respectfully submitted that the rejection is overcome and should be withdrawn.

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Furthermore, Ju would not render these claims obvious since there is no teaching or suggestion that "each emitter line having electron emitting material continuously extending across multiple, separately addressable regions of the cathode substrate, each region adapted to emit electrons therefrom" and/or that "there is no separating structure positioned in between portions of the electron emitting material forming an emitter line on the surface of the cathode substrate". Ju specifically teaches the physical isolation of pixels from each other to prevent cross talk between pixels (see col. 4, lines 4-8); thus, Ju teaches away from that recited in claims 1-9 and 12-14.

**Claim Rejections - 35 U.S.C. §103**

6. Claim 11 stands rejected under 35 U.S.C. § 103(a), as being unpatentable over U.S. Patent No. 6,094, 001 (Xie) in view of U.S. Patent No. 5,548,185 (Kumar et al.).

As shown above, Xie does not render claim 1, upon which claim 11 depends, since Xie does not teach that "there is no separating structure positioned in between portions of the electron emitting material forming an emitter line on the surface of the cathode substrate" as recited in claim 1. Kumar teaches emitters (e.g., cathodes 500) that have flat tops and appears to teach separate flat cathodes 500 without any structure therebetween. However, neither Xie nor Kumar teach or suggest "each emitter line having electron emitting material continuously extending across multiple, separately addressable regions of the cathode substrate, each region adapted to emit electrons therefrom". For example, Kumar specifically teaches that the individual flat cathodes 170 are spaced apart from each other resulting in their isolation (see col. 7, lines 23-25). Thus, Kumar teaches away from that recited in claim 1.

Therefore, since the combination of Xie and Kumar does not render claim 1 or 11 obvious, it is respectfully submitted that the rejection is overcome and should be withdrawn.

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7. Claim 11 stands rejected under 35 U.S.C. § 103(a), as being unpatentable over U.S. Patent No. 5,977, 703 (Ju et al.) in view of U.S. Patent No. 5,548,185 (Kumar et al.).

As shown above, Ju does not render claim 1, upon which claim 11 depends, since Ju does not teach "each emitter line having electron emitting material continuously extending across multiple, separately addressable regions of the cathode substrate, each region adapted to emit electrons therefrom" and/or that there is no separating structure positioned in between portions of the electron emitting material forming an emitter line on the surface of the cathode substrate". Also, as stated above, Kumar does not teach or suggest "each emitter line having electron emitting material continuously extending across multiple, separately addressable regions of the cathode substrate, each region adapted to emit electrons therefrom". For example, Kumar specifically teaches that the individual flat cathodes 170 are spaced apart from each other resulting in their isolation (see col. 7, lines 23-25). Thus, Kumar teaches away from that recited in claim 1.

Therefore, since the combination of Xie and Kumar does not render claim 1 or 11 obvious, it is respectfully submitted that the rejection is overcome and should be withdrawn.

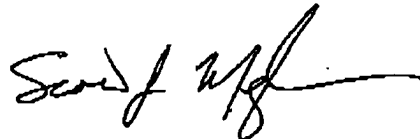
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**CONCLUSION**

Applicants submit that the above amendments and remarks place the pending claims in a condition for allowance. Therefore, a Notice of Allowance is respectfully requested.

Respectfully submitted,

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